

TO:

Personnel Commission

FROM:

Jeanne Greene, Director
Department of Personnel

Refer: August 11, 2006, Agenda

Item: VIII - C

RECOMMENDATION

The Department of Personnel has completed an occupational review of the Mechanical & Construction Trades occupational group. The following class specifications reflect revisions of the duty statements; knowledge, skills and abilities; class concepts and minimum qualifications which were last updated in 1991.

It is recommended that the changes to these class specifications be approved effective July 1, 2007, pending funding by the Legislature, as follows:

Road Construction & Maintenance subgroup

1. Highway Maintenance Supervisor series
2. Highway Maintenance Worker series
3. Highway Construction Aid

Mechanical & Construction Trades
Occupational Group Study
Effective July 1, 2007

FROM-TO CHART

CURRENT				PROPOSED			
CODE	TITLE	GRADE	EEO	CODE	TITLE	GRADE	EEO
9.106	Highway Maintenance Supervisor II	35	H	9.106	Highway Maintenance Supervisor II	35	H
9.115	Highway Maintenance Supervisor I	32	H	9.115	Highway Maintenance Supervisor I	33	H
9.117	Highway Maintenance Worker IV	30	H	9.117	Highway Maintenance Worker IV	31	H
9.120	Highway Maintenance Worker III	28	H	9.120	Highway Maintenance Worker III	29	H
9.127	Highway Maintenance Worker II	26	H	9.127	Highway Maintenance Worker II	26	H
9.1130	Highway Maintenance Worker I	23	H	9.130	Highway Maintenance Worker I	23	H
9.137	Highway Construction Aid	20	H	9.137	Highway Construction Aid	20	H

Basis for Recommendation

The Nevada Department of Transportation (NDOT) requested an in-depth review of the Highway Maintenance Supervisor I (HMS) class and the Highway Maintenance Worker (HMW) series as a result of significant changes that have occurred since they were last studied.

Based on our job analysis, several changes have occurred to the Highway Maintenance Supervisor I's and the higher-level HMW positions since the last occupational study in 1991. (The Highway Maintenance Supervisor II's were reviewed in 2000, and their jobs have not changed substantially.) One of the changes to work performed by Highway Maintenance Worker III's, IV's and Highway Maintenance Supervisor I's includes the operation of more complex and specialized equipment. In the past, the equipment used in highway maintenance and construction was primarily single-function equipment. At present, NDOT uses computerized and multifunctional pieces of equipment which require additional training to operate. Chip spreaders, ice and snowplows, line detectors, and asphalt distributors have become more complex and require additional training for proficient operation.

Other changes include increased sophistication in methods and materials used in snow removal. In the past, the Highway Maintenance Supervisor I's and the Highway Maintenance Workers spread a mixture of sand and salt to highways during snowstorms. Now there are additional anti-icing chemicals which are applied prior to the road freezing and in advance of storms. This requires judgment on the part of the employees who must access and use information provided by the Intelligent Transportation System including the Road Weather Information System and meteorological data to determine the optimal time for application of highway materials.

Other changes are reflected in the additional training now required in diverse areas. For example, employees are trained in asphalt techniques, accident investigation, and equipment operation. In addition, State and federal regulations governing endangered species and the Clean Water Act have been expanded, and the HMW's are required to attend additional training that enables them to fully comply with the regulations and requirements. Employees also receive additional training in the identification and handling of various hazardous materials including biohazards. Training in mine safety provided by the U.S. Department of Labor is a new requirement. Liability issues associated with failure to comply with various environmental regulations have become more costly, and employees are receiving additional training in order to avoid penalties and fines.

Overall, there have been significant changes in the complexity of the equipment used in highway maintenance and construction; the knowledge, skills and abilities and the training required to operate the equipment; the diversity of materials and methods used for ice/snow prevention and removal; and increased sophistication in determining the appropriate make-up of asphalt, concrete and other materials.

As a result of the above changes and with input from subject matter experts (SME's), the class specifications were revised to reflect the above-mentioned changes. Based on our analysis and the SME input, a one-grade increase is recommended for the Highway Maintenance Supervisor I, Highway Maintenance Worker IV and Highway Maintenance Worker III classes. There is no grade change recommended for the Highway Maintenance Supervisor II, Highway Maintenance Worker I and II, and the Highway Construction Aid classes.

Currently, HMW's who are certified to operate Category I equipment and spend less than 25% of their time operating such equipment are classified as HMW II's. Or if they spend 25% or more of their time operating Category I equipment, their positions are classified as HMW III's. This concept was developed during the last occupational group study, but it has not worked well in practice. The percentage of time requirement has created problems in the utilization of personnel and has resulted in either working employees out of class or shutting down a project if a HMW III is not available. In actual practice, it is difficult to track how much time each employee spends operating Category I equipment. In some cases, the HMW II's and III's are used interchangeably in order to meet project schedules.

As a result, it is recommended that the class concepts be modified to reflect Highway Maintenance Worker III as the journey level in the series. It is further recommended the HMW II level be designated as a continuing trainee class. While at that level, the department will provide employees with the necessary training related to the operation of complex or specialized equipment as designated by the department. One year after the employees are certified and with the approval of the appointing authority, they may progress to the HMW III class. This will give the department the flexibility to move employees from one project to another based on geographical and seasonal needs and the size and complexity of projects.

It is also recommended that the class concept for Highway Maintenance Worker IV be modified. Currently, employees are classified as HMW IV only if they serve as leadworkers for a crew of seven. However, if the size of the crew is less than seven, they are classified as HMW III, also a leadworker. As the HMW III is the new journey level, it is recommended that all employees who serve as leadworkers be allocated to the HMW IV class. All leadworkers, in the absence of the supervisor, plan and schedule maintenance and construction activities including determining what equipment and materials are required, assigning personnel, and completing required records, in addition to participating in highway maintenance duties.

9.106 Highway Maintenance Supervisor II, Grade 35: Under general supervision, incumbents oversee and coordinate highway maintenance activities for an assigned geographical territory, and may include district-wide specialty crews such as highway landscaping, highway signs and lighting, pavement marking and striping, concrete/stormwater sweeping operations, and bridge maintenance. Incumbents supervise several HMS I's as well as the work of highway maintenance contractors. They prepare budget proposals, determine the priority of projects in their territory, participate in preliminary design field surveys and provide input regarding any geographical and roadway concerns, and consolidate information submitted by subordinates into detailed reports related to labor and material costs and project status.

9.115 Highway Maintenance Supervisor I, Grade 33: Under general supervision, incumbents supervise skilled and semi-skilled personnel engaged in restoring roadway surfaces and restoring or constructing slopes, shoulders, culverts, structures, fixtures and landscaping located on the roadside or right-of-way; control and inspect work performed in an assigned geographical area of a district, or while implementing a specialty maintenance program such as highway landscaping, highway signs and lighting, or pavement marking and striping. They also plan and schedule work; purchase materials; schedule equipment for both routine highway maintenance activities and the district betterment program; and operate equipment as necessary to ensure that scheduled work is completed.

9.117 Highway Maintenance Worker IV, Grade 31: Under general supervision, incumbents function as leadworkers and as an assistant to the HMS I. Incumbents plan and schedule maintenance activities including determining what equipment and materials are required, assigning personnel, and completing required records. As the assistant supervisor, they perform and oversee all or part of the duties described in the series concept; assign and review the work of lower level personnel; provide input into performance evaluations; assist the supervisor in laying out a variety of roadway or specialty maintenance work; organize equipment, materials, personnel and procedures; and respond to emergencies.

Incumbents interpret a variety of departmental manuals or industry standards relative to the Maintenance Management System, standard plans, hazardous material, traffic control and equipment repair in order to promote efficiency and safety; and may conduct or oversee sampling and testing of materials such as salt/sand or aggregate.

Positions in this class are distinguished from the lower level by ongoing responsibility to provide assistance to the crew supervisor. These responsibilities require a greater depth of knowledge of equipment, materials, methods and procedures relative to highway maintenance and a greater degree of skill in overseeing the work of others, preparing reports and making decisions that impact production and safety.

9.120 Highway Maintenance Worker III, Grade 29: Under general supervision, incumbents in this class are certified by NDOT to operate a variety of complex or specialized highway maintenance and construction equipment in order to restore and maintain the integrity of roadway surfaces; maintain roadside slopes, shoulders, culverts and ditches to restore drainage and prevent erosion; and repair or replace related roadway appurtenances such as guardrails, markers, guide posts and fences. This is the journey level in the series.

Positions in this class are distinguished from those at the lower levels by the complexities involved in operating and training others in the use of specialized or complex highway maintenance and construction equipment as determined by NDOT. Incumbents instruct other employees in the operation of equipment associated with highway maintenance and construction crews including specialty areas such as striping, landscaping, and lighting and signs. They also observe and verify the proficiency of other employees who are working toward certification. Incumbents review written procedures on traffic control, activities coding, sign configuration and placement, highway lighting, pavement marking/striping, chemical spraying and make decisions regarding appropriate applications.

9.127 Highway Maintenance Worker II, Grade 26: Under supervision, incumbents continue to receive training in performing the duties described in the series concept. This is the continuing trainee level, and incumbents may progress to the next level one year after being certified as a fully trained operator of complex or specialized highway maintenance and construction equipment as designated by NDOT and with the approval of the hiring authority.

9.130 Highway Maintenance Worker I, Grade 23: Under close supervision, incumbents work with experienced staff while learning to perform the duties described in the series concept. This is the entry level in the series and incumbents may progress to the next level upon meeting the minimum qualifications and with the approval of the appointing authority.

9.137 Highway Construction Aid, Grade 20: Highway Construction Aids work under close supervision and perform unskilled tasks associated with highway maintenance, construction, testing labs and equipment shops. They perform traffic control tasks during roadway maintenance; set up and remove traffic control devices; act as flagger and operate a pilot vehicle; pick up debris and empty litter barrels; control vegetation near highways, bridges, fences, signs and buildings; remove weeds and mow turf; assist maintenance crews during routine maintenance tasks such as fence, sign and guardrail repair and minor surface patching using common hand and power tools.

7/25/06

Mech+Const rec 8-06PC.doc